

AMATEUR SATELLITE REPORT

AMSAT® NA Newsletter for the Amateur Radio Space Program



Amateur Satellite Report is endorsed by the
American Radio Relay League as the special interest
Newsletter serving the Amateur Radio Satellite Community

Number 160
October 19, 1987

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U.S. Groups To Participate In Moscow Space Future Forum

A combination of official U.S. government representatives, private groups and individual citizens will be among many international delegations attending a Space Future Forum in Moscow October 4 and 5. The meeting is being sponsored by the Space Research Institute of the USSR.

A team of at least 6 senior NASA managers, scientists and astronauts will attend the forum in Moscow according to informed sources. The meeting will be held at the Space Research Institute in Moscow and is timed to coincide with the 30th Anniversary of the launch of the first artificial earth satellite, Sputnik, October 4.

U.S. officials have been reluctant to openly and strongly support the meeting. Some have privately remarked they see the potential for considerable Soviet gloating and propagandizing in the offing. Others said they fear the timing of the event will further emphasize the continuing disparity in space launch capabilities between the U.S. and the USSR. (The U.S. launch program, flat on its back in 1986, is now on the mend, although the Soviets continue to out-launch the rest of the world by a ten-to-one ratio.) Still others have voiced the view that with several joint U.S.-Soviet space science programs already negotiated, the October meeting could set the stage for still further inroads.

NASA has apparently opted to support the meeting at a senior level and avoid what would otherwise be seen as an overt snub. Academician Roald Sagdeev, Director of the Space Research Institute, was at NASA's Washington Headquarters a couple of weeks ago and is thought to have personally invited NASA Administrator Dr. James Fletcher to attend the Moscow meeting. Although Dr. Fletcher will not attend, the attendees will include several individuals on Fletcher's senior staff.

As one of several private groups attending from the U.S., AMSAT has been invited to participate in support of a project called SatelLife. According to Dr. Malcolm MacLure of the Harvard University School of Public Health, SatelLife is a program originated by Harvard Medical School's Dr. Bernard Lown, co-holder of the 1985 Nobel Peace Prize, to advance space telecommunications use in health-information-related projects. Dr. Lown is a Professor of Cardiology at the Harvard Medical School. AMSAT is providing

technical guidance based on its familiarity with small satellite capabilities and inexpensive ground terminals. As with similar programs, SatelLife seeks a low cost approach to humanitarian telecommunications commensurate with its limited resources.

In addition to supporting the SatelLife program, AMSAT leaders are exploring the possibility of future cooperative Amateur Satellite projects involving some coalition of teams from America and Europe including the Soviets. Some AMSAT officials see the upcoming Moscow meeting as a window through which to explore possible implications of "Glasnost" on Amateur Radio. "Glasnost" is Russian for "openness", a term applied to a purported policy of General Secretary Gorbachov towards general relaxation of traditional Soviet secretiveness.

According to AMSAT President WA2LQQ, "Amateur Radio traditionally and fundamentally seeks to remain apolitical. We'll see where this initiative goes".

Ariane Launch Letter Perfect

Sixteen months of recovery efforts were capped in a few dramatic seconds on September 16 when an Ariane-3 rocket quickly lifted off the darkened pad in Kourou, French Guiana, and soon placed two new communications



Larry Roberts, W9MXC is proud of his AMSAT membership as his Illinois plates suggest.

satellites, ECS-4 and AUSSAT, in their transfer orbits. The successful launch was the first since a May, 1986 disaster shut down ESA's access to space.

Post launch analysis showed the accuracy of the launcher was extraordinary; better than 1 part in 10,000 for apogee and perigee. This would be remarkable for a mature launch system but it's even more noteworthy of a launch system as new as Ariane according to industry sources.

AMSAT's Phase 3C will ride the V-22 launch nominally scheduled for January, 1988. This success-oriented schedule assumes a launch about every 6 weeks. AMSAT believes a March date is more realistic for V-22 but is preparing for the January date nevertheless.

"New World" Video Debuts to Positive Reviews

The video production, "The New World of Amateur Radio" had its world premier showing on Sunday, September 20 on a commercial broadcast satellite. Many AMSAT members and others report having seen the debut. These members and a cross-section of Amateur Radio have given the production very favorable reviews. Many have said it's the best documentary and promotion of Amateur Radio they've seen. The video was commissioned by ARRL and was produced by a team under the leadership of network news editor Roy Neal, K6DUE, who is also the on-camera host.

A special segment on Amateur Radio space activities features Astronaut Dr. Tony England, W0ORE, who describes the Space Station Amateur Radio proposal in which AMSAT plays a key role. The Shuttle Amateur Radio Experiment, SAREX, is also described. In all, satellites, space technology and science played a key role in the video. (Tony England is the keynote speaker at the AMSAT Annual Meeting and Space Symposium in Southfield, Michigan November 6-8).

The video is scheduled to be shown on several commercial broadcast stations throughout the U.S. in the next few weeks and months. It will be shown in Rochester in a week or two. Several copies will be available from the AMSAT Videotape library in about two weeks says tape librarian Tom Larson, N1CHM.

Launch Success Catalyzes Phase 3C Launch Campaign

With the successful launch of the Ariane V-19 mission on September 16, AMSAT's Phase 3C satellite launch campaign is under way. If all goes according to plan, AMSAT's newest, biggest and most powerful satellite ever will be lofted into a Molniya elliptical orbit within 6 months. The launch campaign features Phase 3C familiarization articles and information brochures as well as a launch insurance fund raising program.

Phase 3C contains four separate transponders including two modes never before used: Mode S with 70 cm uplink and 13 cm downlink and RUDAK, the packet radio experiment developed by the Munich contingent of AMSAT DL.

FLASH

In a startling turn of events at the Geneva-based World Administrative Conference (WARC), the government of Mexico has moved swiftly to request use of the 430-440 MHz band for commercial land mobile use in that country. The move surfaced late on Friday afternoon, September 25, according to AMSAT's Jan King who is part of the U.S. delegation to the WARC. The timing of the resolution seemed designed to catch delegates from other nations off guard as the weekend closed in.

The move by Mexico to usurp Amateur operation in the weak signal and satellite portion of the band would devastate Mexican 70 cm operation according to King. Furthermore, he said, there is a real possibility of serious interference to satellite uplinks from mobile radio users in the 435 to 438 MHz range.

According to AMSAT Mexico President David Liberman, XE1TU, this situation has been fought in the Mexican courts for some time already. Now, he says, the proponents of the Mexican mobile radio initiative, including powerful economic elements and the former Mexican President, have decided to go WARC route to codify their demands.

From Geneva, Jan King reports other Central and South America countries are watching the issue with considerable interest since many would like to avail themselves of the valuable 70 cm turf. The band is allocated to radiolocation (Primary) and Amateur (Secondary) in IARU Region 2.

IARU Secretary David Sumner, K1ZZ, said from his Connecticut home that the IARU is taking this matter very seriously and is marshalling all available Region 2 forces against the threat. He outlined several tactics IARU might employ to defeat the Mexicans in the ITU meeting Monday, September 28. He said all the required actions were being taken by IARU officials in Geneva and elsewhere and that the prospects are good the Mexican proposal will be voted down.

According to King, the U.S. delegation is firmly against the Mexican proposal and will vote against it. The problem, he says, is that some of the smaller nations may side with Mexico on this issue in return for reciprocal support in other deals. The main attraction of 70 cm to the Mexican and other nations is the ready-made supply of 70 cm radios ala the ham radio suppliers.

In addition, the new Mode JL will be aboard Phase 3C. Mode JL combines 2 meter and 24 cm uplinks to generate a 70 cm downlink. The fourth Phase 3C transponder is a Mode B device very similar to AO-10's Mode B. Preliminary frequencies for all four Phase 3C transponders are found in ASR #149.

AMSAT NA will join with its Phase 3C collaborator, AMSAT DL, to purchase launch insurance for Phase 3C. The insurance would cover the loss of the spacecraft if the worst should happen. AMSAT NA has set \$10,000 as its Launch

Insurance Fund goal and is inviting donations to the program.

Every donation of \$10 or more to the P3C Insurance Fund will be acknowledged with a special Phase 3C QSL card and by having the donor's name and callsign printed in Amateur Satellite Report. Donors of \$30 or more will receive a handsome AMSAT certificate suitable for framing and have their name and callsign in ASR. The certificate will feature a special "ghosted" image of Phase 3C overprinted with the donor's name and callsign. Donors of \$100 or more will receive the certificate, the QSL card and, if they wish, have their photograph appear in ASR. Donors of \$1000 or more will get their choice of a complete, leather-bound set of 7 years of ASR or a special recognition plaque from AMSAT and in addition, will have their photograph prominently featured in ASR if they desire.

Mail your donations to: Phase 3C Insurance Fund, AMSAT, P.O. Box 27, Washington, D.C. 20044, or call, 301-589-6062. Donations may be put on your major credit card. AMSAT is a non-profit scientific, educational corporation and is treated as a charitable organization for tax purposes. Your donation may be tax-deductible.

FO-12 Schedule Reinstated

Fuji OSCAR 12 has returned to its previously announced schedule and the schedule is being closely followed by FO-12 controllers. The following operating schedule was recently released by JARL:

FO-12 will operate:

From		To		Mode
Date	Time	Date	Time	
October	14 01:26	15	00:32	JD
	16 00:46	17	23:52	JD
	20 12:58	21	14:05	JA
	22 13:11	23	12:18	JA
	24 13:25	26	11:37	JA
	28 11:50	28	13:45	JD Note 1
	28 13:52	29	12:58	JD
	31 11:10	01	10:16	JD
November	02 11:23	03	10:30	JD
	04 11:37	05	10:43	JD
	07 08:55	08	10:02	JD

The transponders will be off at others times. The schedule may be changed at any time due to unexpected power situations.

Note 1: On October 28 from 11:50 through 13:45 UTC a special telemetry software package will be loaded to permit telemetry transmission every 2 seconds instead of every minute. The mailbox will be unavailable during this period but the digipeater will be operational. Telemetry reports will be appreciated. Send to JARL via the FO-12 mailbox.

NASA Seems Likely To Win Space Station Funding

The National Aeronautics & Space Administration should win its battle to fund the space station project in the 1988 budget, even though Sen. William Proxmire (D-Wis.) is still trying to rally support for his plan to kill the program. The

1987 AMSAT SPACE SYMPOSIUM

November 6-8 in Detroit

ADVANCE REGISTRATION FORM

One person per form, please.

Name: _____
First Last Callsign

Address: _____
Street City State Zip

Please indicate the options desired from among the following:

Registration \$15.00 \$ _____

The registration fee includes admission to the symposium all weekend, coffee breaks, a copy of the proceedings of the symposium, and eligibility for the door prize drawing.

Student Registration: \$ 7.00 \$ _____

Student registration includes all the above except the proceedings.

Saturday lunch: \$12.00 \$ _____

Saturday banquet: \$22.00 \$ _____

There will be an additional prize drawing for those attending the banquet. _____

Total \$ _____

Room reservations MUST be made directly to the Southfield Hilton Hotel. Rates are \$45 single, \$48 double (plus 4% Michigan State Sales tax and 6% State Assessment). Phone (313) 557-4800 to reserve your room and to charge your deposit via American Express, Visa, Diner's Club, Carte Blanche, or Master Card. Non-smoking rooms are available.

We are pleased to offer discount air fares to the symposium on Northwest Airlines, the Official Airline of the AMSAT Space Symposium. Just call Northwest Meeting Services reservation agents at 1-800-328-1111 (in Minnesota call 1-800-272-1408, in Canada 1-800-378-7747) between 8 AM and 8 PM Central Time to confirm your reservation. Mention AMSAT's special meeting code: 12738, then purchase your tickets from Northwest or your local travel agency. Book early for the best discounts.

If you will require transportation from the airport, please provide us with the following information:

Arrival date/time _____ Airline: _____ Flight: _____

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If you're driving, talk-in will be on WB8VTW/R 147.16 + 600.

REGISTER EARLY! Return forms to AMSAT, P.O. Box 1091, Ann Arbor, MI 48106-1091 by October 30, 1987 or telephone AMSAT Headquarters at (301) 589-6062. All meal reservations must be received by October 30.

senator has opposed the space shuttle and other high-profile space programs in the past without result, and an aide to the HUD-Independent Agencies Subcommittee of the Senate Appropriations Committee, which Proxmire chairs,

concedes this fight is likely to be another losing effort because the space station enjoys bipartisan support. Proxmire maintains that the \$767 million earmarked for the space station in the 1988 budget would go a long way toward cutting the federal deficit while leaving money for other space-science projects. He calls the space station "ill-conceived" and says it "has no mission." NASA calls the space station "essential."

Senator William Proxmire is pushing for a privately funded alternative to the space station — the Industrial Space Facility — as a replacement for the long-term expense of NASA's project. A team made up of Boeing, Lockheed, Westinghouse, and Houston's Space Industries is developing the "man-tended" research platform, and could deploy it with a single space shuttle mission as early as 1990 — five to seven years before NASA's space station is operable. The consortium will pay for construction and launch, and it plans to lease the facility for research — but like NASA, it sees its program as an adjunct to the space station. Comparing the two, says a NASA spokesman, "is like comparing a rowboat to the Queen Mary."

Short Bursts

- AO-10 remains in hibernation. It has been off since power availability fell below required levels. Engineers estimate it will be late autumn when power levels return to required levels. Restoration of AO-10 Mode B operation is anticipated on or about December 1.
- Surplus IBM data acquisition modules suitable for use with the IBM PC and ideal for automatic antenna rotor applications are being offered for sale by a Dayton, Ohio company. According to John Biro, K1KSY, the units are available from Mendelsohn Electronics, Inc, for \$195 + \$6.50 shipping. The units come with a sample Turbo Pascal driver and they offer an advanced Turbo disk. John found the sample disk included enough information to program the unit so the advanced disk was not needed. For information you should call the company at 513-461-3525.

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Amateur Satellite Report (ISSN 0889-6089) is published biweekly for \$16 (inseparable from annual membership dues of \$24) by AMSAT, Post Office Box 27, Washington, DC 20044. Second class postage paid at Silver Spring, MD and additional mailing offices. POSTMASTER: send address changes to *Amateur Satellite Report*, Post Office Box 27, Washington, DC 20044.